A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (A),

(Re- Accredited by NAAC with B Grade)

Jagannaickpur, Kakinada-533002, East Godavari, AP

DEPARTMENT OF ZOOLOGY & AQUACULTURE TECHNOLOGY

2020-2023

Best Practice

"Student Blood Typing: Building a Comprehensive Data Network for Campus Health"

ASD Government Degree College for Women (A), Kakinada
Department of Zoology & Aquaculture Technology Best Practice

Title of the Practice:

"Student Blood Typing: Building a Comprehensive Data Network for Campus Health"

Objectives of the Practice:

The primary objective of this best practice is to maintain a comprehensive database of graduate student's blood groups to facilitate emergency medical assistance. The initiative aims to promote awareness about the importance of blood donation and ensure the availability of compatible blood in case of medical emergencies. Additionally, it fosters a culture of social responsibility and encourages voluntary blood donation among graduate students.

The Context:

In many higher education institutions across India, there is a lack of organized medical data regarding graduate students' blood groups. This gap becomes critical during medical emergencies when immediate blood transfusion is required. The absence of a readily available database can lead to delays in procuring the right blood type, potentially putting lives at risk. Additionally, the awareness and willingness to donate blood voluntarily are often low among graduate students.

The initiative was designed to address these issues by systematically recording blood group information. The practice also aimed to create a voluntary donor registry, ensuring that emergency blood requirements could be met efficiently.

The Practice:

The implementation of the blood grouping initiative in the department involved the following steps:

1. Data Collection: Blood group testing was made as a part of the departmental best practice over an entire year.

2. Database Creation: A secure and confidential database was developed to store the blood group information of all graduate students.

3. Voluntary Blood Donation Registry: Graduate student members were encouraged to voluntarily register as blood donors, making it easier to arrange blood donations during emergencies.

4. Awareness Campaigns: Regular workshops and seminars were conducted to educate the students about the importance of blood donation and dispel the myths concerned with it.

Constraints and Limitations:

- Ensuring voluntary participation from graduate students required continuous motivation and awareness efforts.
- Maintaining confidentiality and ethical handling of medical data was a key concern.

Evidence of Success:

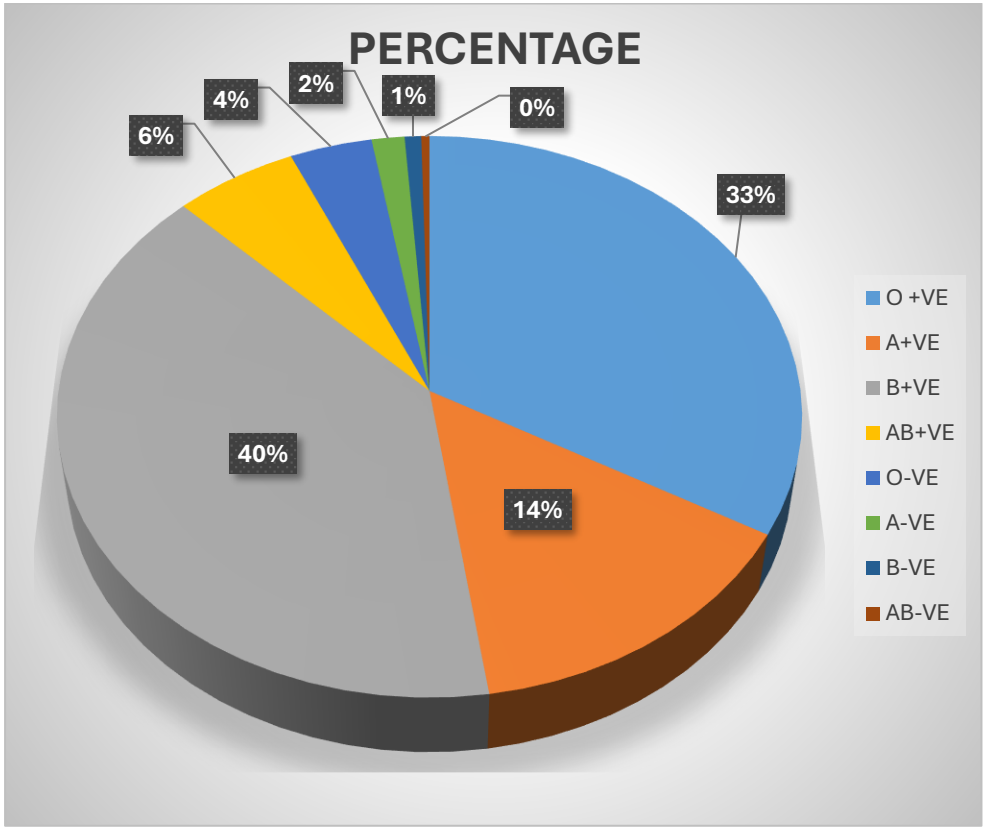
The implementation of this practice has resulted in a well-organized blood grouping database. Feedback from graduate students indicates a heightened sense of responsibility and awareness regarding blood donation.

Blood Group Analysis for the year 2022-2023

S.NO	BLOOD GROUP	YEAR	2022-2023												
		GROUP	B.Sc MPC (EM)	B.Sc - HSC	B.Sc - CBMB	B.Sc- CBZ (EM)	B.Sc- CZAQT	B.Sc- CBHC	B.Sc- MSCS	B.Sc- MPCS	B.COM- VOC	B.COM -EM	B.A- HEP	TOTAL	PERCENTAGE
1	O +VE		5	3	3	17	5	3	4	11	10	20	4	85	33
2	A+VE		5	2	1	5	0	2	0	2	8	11	1	37	14
3	B+VE		2	1	5	16	4	7	4	22	15	22	4	102	40
4	AB+VE		0	0	0	3	0	0	1	4	2	3	2	15	6
5	O-VE		0	0	1	1	2	0	0	1	2	2	1	10	4
6	A-VE		0	0	1	1	0	0	0	0	1	1	0	4	2
7	B-VE		0	0	0	1	0	0	0	0	0	0	1	2	0.78
8	AB-VE		0	0	0	0	0	0	0	0	0	1	0	1	0.39
9	TOTAL		12	6	11	44	11	12	9	40	38	60	13	256	100

Percentage of blood groups for the year 2022-2023

BLOOD GROUP	PERCENTAGE
O +VE	33.2031
A+VE	14
B+VE	40
AB+VE	6
O-VE	4
A-VE	2
B-VE	0.78
AB-VE	0.39



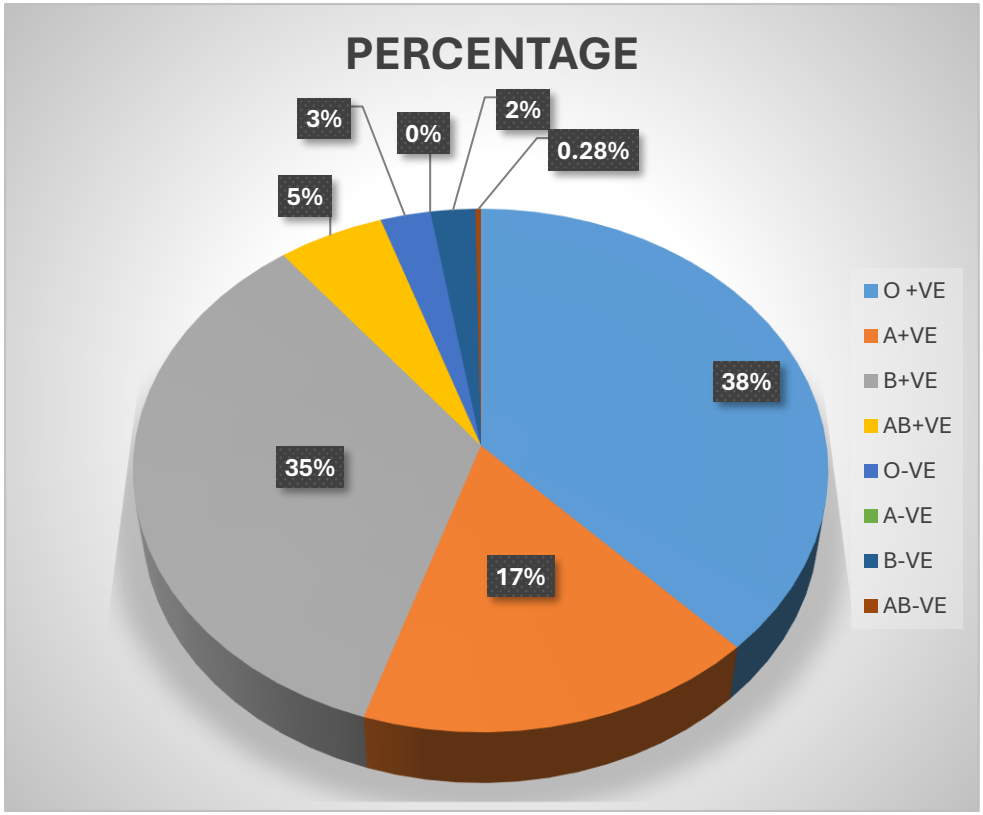
Analysis: B+ and O+ are the most common, there will be a higher demand and supply for these types. O- is crucial in emergencies, but its rarity makes it critical to maintain sufficient blood bank reserves. AB- is the rarest (0.39%), meaning people with this blood type may face challenges in finding compatible donors.

Blood Group Analysis for the year 2021-2022

S.NO	BLOOD GROUP	YEAR	2021-2022													
		GROUP	B.Sc MPC (EM)	B.Sc - HSC	B.Sc - CBMB	B.Sc- CBZ(EM)	B.Sc- CZAQT	B.Sc- CBHC	B.Sc- MPCS	B.COM- VOC	B.COM B	B.COM C	B.A- THP	B.A- HEP	Total	Percentage
1	O +VE		10	6	5	20	10	10	19	6	15	14	6	12	133	38%
2	A+VE		8	4	2	9	5	4	6	3	8	4	0	7	60	17%
3	B+VE		15	11	9	12	9	7	17	7	12	11	0	11	121	35%
4	AB+VE		4	1	1	3	1	1	2	2	2	1	0	1	19	5%
5	O-VE		1	1	1	0	1	0	1	0	0	4	0	0	9	3%
6	A-VE		0	0	0	0	0	0	0	0	0	0	0	0	0	0%
7	B-VE		1	2	0	0	0	0	3	1	0	0	0	1	8	2%
8	AB-VE		0	0	0	0	0	0	1	0	0	0	0	0	1	0.28%
9	TOTAL		39	25	18	44	26	22	49	19	37	34	6	32	351	100%

Percentage of blood groups for the year 2021-2022

BLOOD GROUP	PERCENTAGE
O +VE	38%
A+VE	17%
B+VE	35%
AB+VE	5%
O-VE	3%
A-VE	0%
B-VE	2%
AB-VE	0.28%



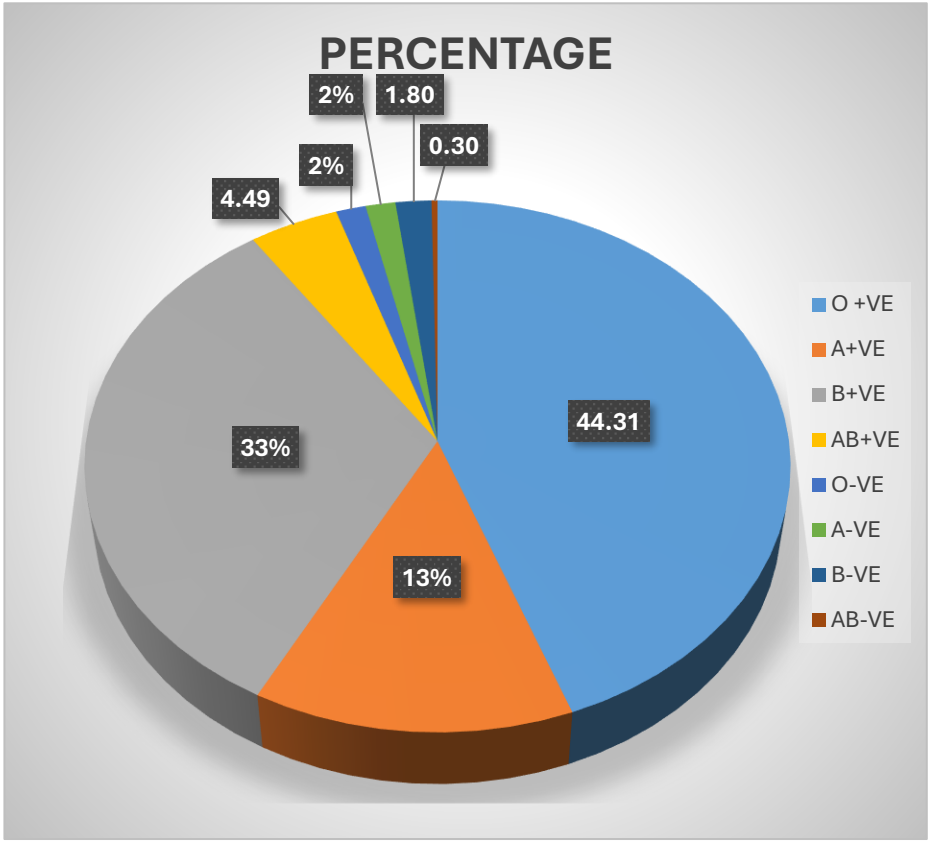
Analysis: O+ (38%) is the most prevalent, meaning a large portion of the student population has this type. B+ (35%) is the second most common. Together, O+ and B+ make up 73% of the students, making them the most frequently needed blood types for transfusions. A+ (17%) is the third most common, showing a significant presence & AB+ (5%) is rare but important because AB+ individuals can receive blood from any type. O- (3%) is rare but crucial as a universal donor, meaning its availability is critical in emergencies. B- (2%) is also rare, requiring a limited donor pool. AB- (0.28%) is the rarest, making up less than 0.5% of the total students. This means AB- individuals may have difficulty finding compatible donors. A- (0%) blood group is absent in the year of students 2021-2022, indicating extreme rarity or lack of representation.

Blood Group Analysis for the year 2020-2021

S.No	BLOOD GROUP	YEAR	2020-2021																
		GROUP	B.Sc MPC (EM)	B.Sc - HSC	B.Sc CBMB	B.Sc CBZ (TM)	B.Sc- CBZ (EM)	B.Sc- CZAQT	B.Sc- CBHC	B.Sc MPC (TM)	B.Sc- MPCS	B.COM- VOC	B.COM EM	B.COM- TM	B.A- THP	B.A- HEP	B.A- HET	Total	Percentage
1	O +VE		10	12	4	7	17	4	8	5	19	10	17	15	6	10	4	148	44.31
2	A+VE		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	45	13.47
3	B+VE		7	2	5	10	3	11	3	1	14	5	13	20	8	6	1	109	32.63
4	AB+VE		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	4.49
5	O-VE		1	0	0	1	0	0	0	0	1	0	0	1	0	1	0	5	1.50
6	A-VE		0	1	0	0	0	0	1	0	1	0	1	0	0	0	1	5	1.50
7	B-VE		0	1	0	0	1	0	0	1	0	0	0	0	1	2	0	6	1.80
8	AB-VE		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.30
9	TOTAL		22	20	13	22	25	19	16	11	39	19	36	40	19	23	10	334	100.00

Percentage of blood groups for the year 2020-2021

BLOOD GROUP	PERCENTAGE
O +VE	44.31
A+VE	13.47
B+VE	32.63
AB+VE	4.49
O-VE	1.50
A-VE	1.50
B-VE	1.80
AB-VE	0.30



Analysis: O+ and B+ make up 76.94% of the student population, indicating that these two blood groups are the most frequently required in blood banks. A+ (13.47%) is the third most common, but it is significantly less frequent than O+ and B+. AB+ (4.49%) is rare but still notable since AB+ individuals can receive blood from all types. O- (1.50%) is rare but extremely important because it is a universal donor for all blood types in emergencies. A- (1.50%) and B- (1.80%) are also quite rare, requiring a limited but crucial donor base. AB- (0.30%) is the rarest blood type, making up less than half a percent of the population. Individuals with this blood type may struggle to find compatible donors.

Gallery


GPS Map Camera
Kakinada, Andhra Pradesh, India
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Lat 16.940212°
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Problems Encountered:

- Initial resistance from graduate students due to concerns over privacy and misinformation about blood donation.
- Logistical challenges in conducting blood group testing and maintaining an updated database.
- Need for continuous motivation and engagement to ensure sustained participation in blood donation programs.

Resources Required:

- Blood Group testing kit.
- Dedicated personnel for conducting blood grouping
- Secure IT infrastructure for database management.
- Department support for organizing awareness programs on blood donation.
- Dedicated personnel for coordinating between graduate students & Community

Conclusion:

"Between 2020 and 2023, the majority of students in our college had a positive blood group compared to a negative one. As a result, students with positive blood groups are encouraged to donate blood, while those with negative blood groups are made aware of the importance of maintaining their health due to the rarity of their blood type in the population."

By integrating blood grouping as a best practice of the Department of Zoology & Aquaculture Technology, our institution can ensure a readily available medical resource for emergencies. Moreover, motivating a voluntary blood donor registry can strengthen community engagement and social responsibility. This initiative not only enhances institutional healthcare preparedness but also contributes to the broader cause of blood donation awareness and availability. This initiative aligns with the core values of social responsibility, community service, and student welfare. By fostering a culture of health awareness and proactive medical readiness, the institution sets an example for other educational establishments.